Claims

[c1] 1. A method for controlling an on/off state of an internal combustion engine disposed in a motor vehicle, the running internal combustion engine capable of being automatically switched off, comprising: suppressing said capability of automatically switching off in response to detection of a stop-and-go situation.

[c2] 2. The method of claim 1 wherein said stop-and-go situation is detected when a vehicle brake is released and reactivated within a predetermined time and a velocity of the vehicle is less than a predetermined speed.

[c3] 3. The method of claim 2 wherein said time is 5 sec.

[c4] 4. The method of claim 2 wherein said predetermined speed is 5 km/hr.

[c5] 5. The method of claim 1, further comprising: discontinuing said suppression of said switching off when a vehicle speed is greater than a predetermined speed and an accelerator pedal is activated.

[c6] 6. The method of claim 1, further comprising: discontinuing said suppression of said switching off when a predetermined waiting time has elapsed.

[c7] 7. The method of claim 1 wherein said waiting time is approximately 5 seconds.

[c8] 8. The method of claim 1, further comprising: switching off the engine automatically when said automatic switching is suppressed and a vehicle brake is activated and a predetermined waiting time has elapsed.

[c9] 9. The method of claim 1 wherein said waiting time is approximately 5 seconds.

[c10] 10. The method of claim 1, wherein said stop-and-go situation is detected when a reverse (R) or low (L) gear of an automatic transmission is selected, said automatic transmission being coupled to the engine.

[c11] 11. The method of claim 10, further comprising: discontinuing said suppression of said switching off when a drive (D) or neutral (N) gear of said automatic transmission is selected.

[c12] 12. The method of claim 1 wherein a global positioning system is coupled to

the vehicle, further comprising:
determining a location of the vehicle via said global positioning system; and
detecting said stop-and-go situation based on said location wherein said location is compared to a digital map in which one or more of the following are indicated: an expressway section in which stop-and-go situations are normally encountered, grade crossings, pedestrian crossings, and any location where brief standstills occur.

[c13] 13. A method for controlling an on/off state of an internal combustion engine disposed in a motor vehicle, the running internal combustion engine capable of being automatically switched off, the engine having an automatic transmission, comprising:
switching off the engine automatically when a velocity of said vehicle is substantially zero and a vehicle brake is activated; and
suppressing said capability of automatically switching off when a park (P) gear of said the automatic transmission is selected.

[c14] 14. A method for controlling an on/off state of an internal combustion engine disposed in a motor vehicle, the running internal combustion engine capable of being automatically switched off, the engine having an automatic transmission, the automatic transmission having a gearshift lever capable of accessing positions drive (D), reverse (R), neutral (N), and manual (M), comprising:
switching off the engine automatically when a velocity of said vehicle is substantially zero and a vehicle brake is activated and the manual (M) position of the automatic transmission is selected.

[c15] 15. The method of claim 14, further comprising starting the engine automatically when said vehicle brake is released.

[c16] 16. The method of claim 14, further comprising starting the engine automatically when an accelerator pedal is activated.

[c17] 17. A method for controlling an on/off state of an internal combustion engine disposed in a motor vehicle, the running internal combustion engine capable of being automatically switched off, the engine having an automatic transmission,

the automatic transmission having a gearshift lever capable of accessing positions drive (D), reverse (R), neutral (N), and manual (M), comprising: switching off the engine automatically when a velocity of said vehicle is substantially zero and a vehicle brake is activated and the drive (D) position of the automatic transmission is selected.

[c18] 18. The method of claim 17, further comprising switching off the engine automatically when a velocity of said vehicle is substantially zero and a vehicle brake is activated and the neutral (N) position of the automatic transmission is selected

19. The method of claim 17, further comprising starting the engine automatically when the drive (D) position of the automatic transmission is selected and one of the following occurs: said vehicle brake is released and an accelerator pedal is activated.

[c19] 20. The method of claim 18, further comprising starting the engine automatically when the neutral (N) position of the automatic transmission is selected and one of the following occurs: said vehicle brake is released and an accelerator pedal is activated.

[c20] 21. The method of claim 17, further comprising:
Starting the engine automatically when the manual (M) or reverse (R) position of the automatic transmission is selected; and
suppressing the capability of switching off automatically in response to said starting.

[c21] 22. The method of claim 18, further comprising:
starting the engine automatically when the manual (M) or reverse (R) position of the automatic transmission is selected; and
suppressing the capability of switching off automatically in response to said starting.

[c22] 23. A method for controlling an on/off state of an internal combustion engine disposed in a motor vehicle, the running internal combustion engine capable of being automatically switched off, the engine having an automatic transmission,

the automatic transmission having a gearshift lever capable of accessing positions drive (D), reverse (R), neutral (N), and manual (M), comprising: suppressing the capability of switching off automatically when the reverse (R) position of the automatic transmission is selected.

[c23] 24. The method of claim 23, further comprising discontinuing said suppression of the switching off when a velocity of the vehicle is greater than a predetermined velocity and the reverse (R) position of the automatic transmission is deselected.

[c24] 25. The method of claim 24 wherein said predetermined velocity is 5 km/hr.

[c25] 26. A computer readable storage media having stored therein data representing instructions executable by a computer to control an internal combustion engine disposed in a motor vehicle, the running internal combustion engine capable of being automatically switched off, the storage media comprising: instructions to suppress said capability of automatically switching off in response to detection of a stop-and-go situation.

[c26] 27. The storage media of claim 26 wherein said stop-and-go situation is detected when a vehicle brake is released and reactivated within a predetermined time and a velocity of the vehicle is less than a predetermined speed.

[c27] 28. The storage media of claim 26, further comprising instructions to discontinue said suppression of said switching off when a predetermined waiting time has elapsed.

[c28] 29. The storage media of claim 26, further comprising instructions to switch off the engine automatically when said automatic switching is suppressed and a vehicle brake is activated and a predetermined waiting time has elapsed.

[c29] 30. The storage media of claim 26, wherein said stop-and-go situation is detected when a reverse (R) or low (L) gear of an automatic transmission is selected, said automatic transmission being coupled to the engine.

[c30] 31. The storage media of claim 30, further comprising instructions to

discontinue said suppression of said switching off when a drive (D) or neutral (N) gear of said automatic transmission is selected.

[c31] 32. The storage media of claim 26 wherein said stop-and-go situation is detected via a global position system coupled to the vehicle, said global position system sensing when the vehicle is located on expressway sections in which stop-and-go situations are normally encountered.

[c32] 32. The storage media of claim 26 wherein the vehicle is coupled to a global positioning system, further comprising:
instructions to determine a location of the vehicle via said global positioning system;
a digital map indicating zones in which brief standstills occur; and
instructions to indicate that said stop-and-go situation is detected when said vehicle location corresponds to said standstill zones.

[c33] 33. The storage media of claim 32 wherein said standstill zones comprise expressway interchanges, highway intersections, pedestrian crossings, or traffic lights.